

Winter Weather Preparedness Guide

South Dakota Office of Emergency Management

October 27-31, 2008



Be Prepared for Winter Weather

Winter Storms, especially blizzards, can be very dangerous. Preparing before extremely cold, snowy weather occurs can save your life. Know what winter storm watches and warnings mean. If a Winter Storm Watch has been issued for your area, hazardous winter weather conditions (such as snow greater than 6 inches in 24 hours, winds gusting over 35 mph, or visibilities less than a 1/4 mile) are expected in the next 12 to 36 hours. A Winter Storm Warning means the conditions listed for the Watch exist.

Try to stay indoors during a blizzard. If you have to go outside to check on animals or for another reason, be sure to dress warmly in loose fitting layers of clothing. Wear heavy gloves to protect your hands and heavy socks with boots that will not absorb water. Cover your mouth so that you don't breathe in freezing cold air that can damage your lungs. Keep your body dry. Know the signs of hypothermia or frostbite.

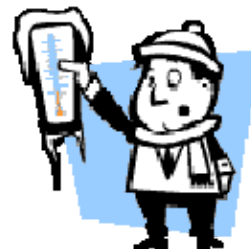
If you are traveling at all when a winter storm is possible, then you should al-

ways bring emergency supplies with you. You can never predict when you might get stranded and need them. If stranded, make

sure you stay in your vehicle. Run your vehicle about ten minutes every hour. Open windows a little for fresh air to avoid carbon monoxide poisoning. Make yourself visible to rescuers by turning on the dome light at night, tie a colored cloth to your antenna, and raise the hood after the snow stops falling.

If you are caught outside, find a dry shelter and cover all exposed parts of the body. If shelter is not available, prepare a lean-to, wind break, or snow-cave for protection from the wind. Build a fire for heat and to attract attention. Place rocks around the fire to absorb and reflect heat. Do not eat snow, it will lower your body temperature. Melt it first.

Weather related dangers can be very unexpected. Being prepared for a potential hazardous situation could save your life.



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The Department of Health and the Department of Public Safety have launched a campaign encouraging South Dakotans to prepare for emergencies in their homes, businesses, towns, and cities. The bReady campaign encourages individuals to have an emergency bReady kit, make a family emergency plan and learn more about the different threats that may affect them from natural disasters to epidemics. Learn more about how to prepare for emergencies at www.bReadySD.com.



Winter Travel

Winter driving can be extremely hazardous at times due to poor road conditions or reduced visibilities from heavy or blowing snow. During these times, travel is difficult and not recommended. Many people still venture outdoors not knowing what they will encounter. Many winter deaths and injuries can be attributed to people becoming stranded and venturing away from their vehicle. To avoid this, you should stay inside your vehicle and wait for help.

When traveling this winter season:

- Listen to the forecast before departing and postpone travel if inclement weather is occurring or expected.
- Avoid traveling alone. Inform others of your timetable and planned routes.

- Keep your gas tank near full.
- Adjust your speed to the condition and increase following distances.
- Carry a Winter Survival Kit in your vehicle at all times!

Items that should be in your Survival Kit:

- Shovel and flashlight with extra batteries
- First Aid Kit and medications
- Non-perishable food, such as granola bars and peanuts
- Candles and matches
- Extra clothing, sleeping bags or blankets
- Jumper Cables and Tire Chains
- Battery-operated radio
- Cell phone with fully charged batteries
- Windshield scraper and brush
- Brightly colored cloth to tie on the antenna so the vehicle can be easily located



Emergency Supply Kit

Emergency Supply Kits should have the basic supplies on hand in order to survive at least three days if an emergency occurs. Individuals should consider having two emergency supply kits, one kit at home and smaller portable kits in their vehicle, workplace, or other places they may spend their time. The following listing is of basic items that every emergency supply kit should include.

Emergency Needs

- Battery powered radio and flashlight
- Water (1 gallon per person/per day)
- First aid kit and manual
- Sleeping bags/blankets and extra clothing
- Manual can opener
- "Special needs" items (infant formula, eye glasses, medica-

tions, ect.)

- Waterproof/windproof matches with emergency candles
- Non-perishable foods
- Whistle

Sanitation Kit

- Plastic bucket with tightly fitted lid
- Plastic trash bags and ties
- Disinfectant
- Paper cups, plates, and plastic utensils
- Personal toiletries
- Aluminum foil
- Paper towels and toilet paper
- Personal hygienic needs

Other Emergency Needs

- Pen and paper

- Money
- Work gloves
- Basic tools/Utility knife
- Toys, books, puzzles, games
- List of contact names and phone numbers
- Hardwired phone (not cordless)

Copies of Legal Papers

- Marriage License
- House Mortgage
- Property ownership
- Automotive ownership
- Wills
- Drivers license
- Bank accounts
- Insurance policies

Wind Chill Dangers

Winter temperatures can be deceiving. Thermometers measure only the cold. Don't forget that the effects on your body are compounded by the wind. The combined effect of winter cold and wind speed is called wind chill. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature.

Frostbite is the damage to body tissues caused by extreme cold. A wind chill of -20°F will cause frostbite in just 30 minutes. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes or the tip of the nose. If symptoms are detected, get medical help immediately! If you must wait

for help, slowly rewarm affected areas. However, if the person is also showing signs of hypothermia, warm the body core before the extremities.

Hypothermia is a condition brought on when the body temperature drops to less than 95°F. It can kill. For those who survive, there are likely to be lasting kidney, liver, and pancreas problems. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion. Take the person's temperature. If below 95°F, seek medical care immediately!

What if medical care is not available? If a person has symptoms of hypothermia warm



them slowly, starting with the body core. Warming the arms and the legs first drives cold blood toward the heart and can lead to heart failure. If necessary, use your body heat to help. Get the person into dry clothing and wrap in a warm blanket covering head and neck. Do not give the person alcohol, drugs, coffee or any hot beverage or food. Warm broth is the first food to offer.



NWS Windchill Chart



		Temperature (°F)																		
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63	
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72	
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77	
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81	
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84	
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87	
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89	
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91	
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95	
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times

30 minutes

10 minutes

5 minutes

Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Winter Fire Safety

Winter holidays can be a joyous time for all, but nearly 50% of civilian fire deaths occur throughout the winter season: November-February. Most heating fires in South Dakota involve fireplaces and chimneys. The most dangerous place to be, with regard to fire, is in your own home. Your home can be a cozy, warm place away from a harsh winter, but it can also become dangerous if you don't take special precautions.

Tips to Eliminate Winter Fires:

- Safety around heating equipment and appliances is an important first step in reducing the threat of fire. Keep children and loose clothing at a safe distance.
- Use a yardstick to measure the distance between heating equipment and combustible material. Unless you have three feet of clearance, you are at risk.
- Always turn off portable heating appliances when leaving home or retiring for the evening. Be sure the fire in the fireplace is out before going to bed.
- Have chimneys, fireplaces and other heating devices inspected by a qualified professional at the start of every heating season.
- Use a sturdy screen or glass closure in front of your fireplace, and burn only clean fireplace wood. Never burn treated lumber.
- Install smoke detectors on every level of your home, including the basement, and test them monthly.
- If you smell gas in your home, contact your local utility company or qualified professional heating contractor and follow their advice.
- Inspect heat tape before using it. Never thaw frozen pipes with an open flame.

Winter Safety Tips

- Protect neighborhood homes this winter. Keep your nearest fire hydrant clear of snow.
- After holiday parties, check wastebaskets and furniture for smoldering cigarettes.

- Place holiday decorations well away from heat sources. If you have a tree, water it daily.
- Do not burn holiday wrappings in a fireplace; it may cause a chimney fire.
- Pay attention when cooking. If a pan is on fire, cover it with a lid. Water will spread the fire.
- Turn off and unplug lights and decorations before going to bed or leaving your house. Buy electrical decorations that have been approved by a national testing laboratory. Don't overload outlets.

Candle Burning Safety Tips

- Place candles on a secure surface in sturdy noncombustible holders that won't tip over. Make sure enough to catch drippings.
- Keep candles away from children and pets. Candles should be out of children's reach.
- Keep candles away from combustible items such as curtains, books, and paper. Remember the "three-foot rule" - anything combustible needs to be kept three feet from a heat source.
- Keep candles away from flammable liquids. Do not use a candle for light when fueling a kerosene heater or lantern. The flame may ignite the fumes.
- Avoid using candles during a power outage. A flashlight is a safer option. Don't carry a lit candle.
- Remember to extinguish candles when leaving the room or going to sleep. Never leave children or pets unattended in a room with a lit candle.



Family Communications Plan

Your family may not be together when disaster strikes, so plan how you will contact one another and then review your plan for different situations.



Out-of-town contact: Ask an out-of-town friend to be your family contact. After a disaster, it's often easier to call long distance. This person may be in a better location to communicate among separated family members.

Out-of-Town Contact Name: _____ Telephone Number: _____
E-mail: _____ Telephone Number: _____

Keep an updated record for each family member:

Name: _____ Social Security Number: _____
Date of Birth: _____ Important Medical Information: _____

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Where to go in an emergency. Write down site-specific information for the places family members spend time:

Home: _____ **Work:** _____
Address: _____ Address: _____
Phone Number: _____ Phone Number: _____
Neighborhood Meeting Place: _____ Evacuation Location: _____
Regional Meeting Place: _____

School: _____ **Work:** _____
Address: _____ Address: _____
Phone Number: _____ Phone Number: _____
Evacuation Location: _____ Evacuation Location: _____

School: _____ **Additional location:** _____
Address: _____ Address: _____
Phone Number: _____ Phone Number: _____
Evacuation Location: _____ Evacuation Location: _____

School: _____ **Additional location:** _____
Address: _____ Address: _____
Phone Number: _____ Phone Number: _____
Evacuation Location: _____ Evacuation Location: _____

Important Contacts	Name	Telephone Number	Policy Number
Doctor(s):			
Pharmacist:			
Medical Insurance:			
Homeowners/Rental Insurance:			
Veterinarian/Kennel (for pets):			
Other:			

Protecting our Pets

Winter can be a particularly difficult time for pets. Give your pet a safer, healthier cold weather season by following these tips:

- A temperature of 10°F or below is too cold for any pet to tolerate. The physical stress of cold temperatures can make pets more susceptible to illness or infection.
- Provide outdoor dogs or cats with a dry, insulated pet house or shelter out of the wind. Staying warm demands extra calories, so increase your pet's food intake, particularly protein.
- Remove ice, salt, and caked on mud from your pet's paws and coat right away. Contact your veterinarian immediately if you suspect your pet has frostbite. Frostbitten skin may turn reddish,

white, or gray, and it may be scaly or sloughing.

- Cats and kittens often nap on car engines. Knock on the hood or honk the horn then wait a few minutes before starting the car.
- Pets like the smell and taste of antifreeze, but even a small amount can kill them. Thoroughly clean up spills at once. Tightly close containers and store them where pets cannot get to them.
- Never let your dog off its leash in the snow or ice. Dogs can lose their scent in snow and ice and become lost in the harsh weather. Make sure pets, such as dogs, always wear their ID tag.
- Don't use metal water dishes outside; your pet's tongue could

stick to the frozen metal.

- Many plants, including holly, mistletoe, and poinsettia, are toxic to pets. Keep them out of your pet's reach.
- Always have fresh, clean water available.
- Dogs confined to the house because of winter weather may lack proper exercise and suffer depression. Help by giving more attention and encouraging them to be active.



Winter Safety for Schools

Children can be especially susceptible to the dangers associated with winter weather. Their youthful enthusiasm often takes over when common sense and safety should prevail. Even if they are cold, wet, or exhausted, they often are not conscious of the potential impact these conditions pose.

School administrators and principals need to be sensitive to the dangers winter weather can pose to children and be prepared. Winter weather procedures and practices need to be established before the onset of the winter season. When formulating a winter weather safety plan consider the following:

- The best source for the latest information is NOAA weather

radio. Most counties fall within their coverage area. Commercial radio or television should also be monitored. Arrangements can also be made with county sheriff's office to have critical weather forecasts relayed to the school.

- All schools need to have a functional plan in regard to closures due to snow, ice, or extreme cold.
- During the winter months, guidelines need to be established regarding outside recess periods. Temperatures and wind chills need to be monitored and criteria set as to when outside recess will be allowed.
- School bus drivers should receive extra training on driving during winter weather. Snow and ice can often accumulate quickly

and unexpectedly on roads creating dangerous driving conditions.

- With many households having two working parents today, it may be necessary for some children to be brought to school early. Schools should make provisions to allow children inside schools buildings as early as possible during cold weather.



Care for the Elderly

As your body becomes older it becomes less able to respond to long exposure to cold winters. In cold weather, some older people may develop accidental hypothermia, a drop in internal body temperature that can be fatal if not detected and treated properly.

Accidental Hypothermia

Hypothermia is a condition of below normal body temperature—typically 95°F or under. Accidental hypothermia may occur in anyone who is exposed to severe cold without enough protection. However, some older people develop accidental hypothermia after exposure to relatively mild cold.

Those elderly most likely to develop accidental hypothermia are: the chronically ill, the poor who are unable to afford enough heating fuel, and those who do not take the normal steps to keep warm. The small number of aged person whose body temperature regulation is defective face the greatest danger. For unknown reasons, these people do not feel cold or shiver, and thus cannot produce body heat when they need it. It is interesting to note that many people who have “felt cold” for years may actually have a lower risk of accidental hypothermia.

The only sure way to detect hypothermia is to use a special low-reading thermometer, available in most hospitals. A regular thermometer will also do as long as you shake it down well. If your temperature is below 95°F or does not register, get emergency medical help. Other signs to look for include: an unusual change in appearance or behavior during cold weather; slow, and sometimes irregular heart-beat; slurred speech; shallow, very slow breathing; sluggishness; and confusion. Treatments consist of re-warming the person under a doctor's supervision, preferably in a hospital.



Protective Measures

There is no strong scientific basis for recommending room temperatures for older people. However, setting the heat at 65°F in living and sleeping areas should be adequate in most cases, although sick people may need more heat.

Measures you can take to prevent accidental hypothermia include:

- Dress warmly even when indoors, eat enough food, and stay as active as possible.
- Because hypothermia may start during sleep, keep warm in bed by wearing enough clothing and using blankets.
- If you take medicine to treat anxiety, depression, nervousness, or nausea, ask your doctor whether the medication might affect the control of body temperature.
- Ask friends or neighbors to look in on you once or twice a day, particularly during a cold spell. See if your community has a telephone check-in or personal visit service for the elderly or home-bound.

Contact for Assistance

Anyone trying to save on fuel costs can protect against hypothermia by dressing warmly and heating only one or two rooms of the home.

There are government-funded programs to help low-income families pay high energy bills, weatherize (insulate) their homes, or even get emergency repairs of heating/cooling units. Your local community actions agency or area agency on aging should be able to direct you to the proper source of assistance.

When there is snow outside, bundle up in lots of layers of clothing and wear a hat. Ask an adult if it's okay to play outside — and come inside often for "warm-up" breaks.



Emergency Phone Numbers

My Family Name: _____

My Phone Number: _____

My Address: _____

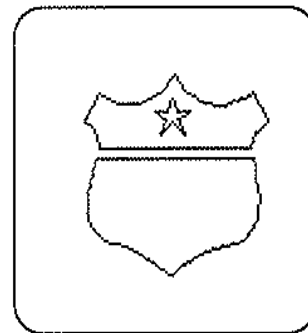
My Town: _____



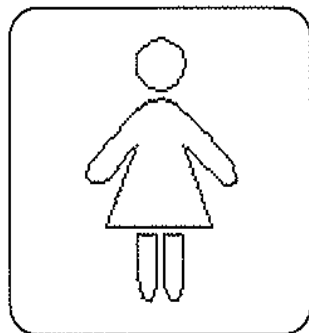
Ambulance



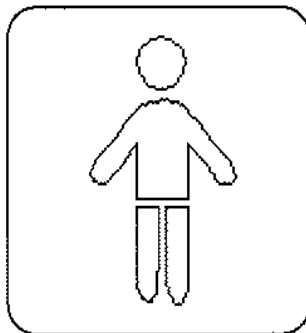
Fire



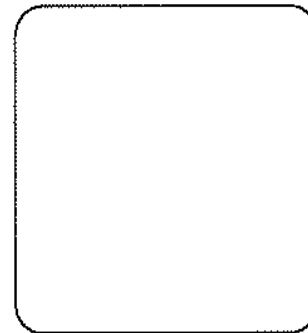
Police/Sheriff



Mother



Father



Other

County Emergency Managers' Contact Numbers

Aurora_____605.942.7751	Grant_____605.432.1489	
Beadle_____605.353.8421	Gregory_____605.775.2626	
Bennett_____605.685.6541	Haakon_____605.567.3515	
Bon Homme_____605.589.4242	Hamlin_____605.783.7831	
Brookings_____605.692.5212	Hand_____605.853.2408	
Brown_____605.626.7122	Hanson_____605.239.4218/4423	
Brule_____605.234.3433	Harding_____605.375.3313	Minnehaha_____605.367.4290
Buffalo_____605.293.3231	Hughes_____605.773.7454	Moody_____605.997.3251
Butte_____605.723.0900	Hutchinson_____605.770.7927	Pennington_____605.394.2185
Campbell_____605.955.3598	Hyde_____605.852.2595	Perkins_____605.244.5243
Charles Mix_____605.487.7845	Jackson_____605.837.2333	Potter_____605.765.2387
Clark_____605.532.5891	Jerauld_____605.539.0243	Roberts_____605.698.3800
Clay_____605.677.7185	Jones_____605.669.7111	Sanborn_____605.796.4511
Codington_____605.882.6272	Kingsbury_____605.854.3711	Shannon_____605.745.7562
Corson_____605.273.4210	Lake_____605.256.7611	Spink_____605.472.4591
Custer_____605.673.8128	Lawrence_____605.578.2122	Stanley_____605.773.7454
Davison_____605.995.8640	Lincoln_____605.764.5746	Sully_____605.258.2244
Day_____605.345.3222	Lyman_____605.869.2266	Todd_____605.828.0664
Deuel_____605.874.8189	Marshall_____605.448.2339	Tripp_____605.842.2300
Dewey_____605.865.3505	McCook_____605.425.2085	Turner_____605.297.6000
Douglas_____605.779.5761	McPherson_____605.439.3331	Union_____605.356.2351
Edmunds_____605.287.4394	Meade_____605.347.4222	Walworth_____605.845.2800
Fall River_____605.745.7562	Mellette_____605.259.3371	Yankton_____605.668.5289
Faulk_____605.598.6222	Miner_____605.772.4533	Ziebach_____605.365.5129



Tribal Emergency Managers' Contact Numbers

Cheyenne River Sioux Tribe _____605.964.6685	Oglala Sioux Tribe _____605.455.2584	Sisseton Wahpeton Sioux Tribe _____605.698.4972
Crow Creek Sioux Tribe _____605.245.2779	Rosebud Sioux Tribe _____605.747.2559	Standing Rock Sioux Tribe _____701.854.7461/2359
Lower Brule Sioux Tribe _____605.473.5532	Santee Sioux Tribe _____605.997.3891	Yankton Sioux Tribe _____605.487.7192

Internet Resources



<http://www.redcross.org/services/disaster/eduinfo/>

The American Red Cross has many materials available for teachers, educators, and presenters to use to help children and families learn how to stay safe and prevent or reduce the effects of disasters or other emergencies.

<http://www.fema.gov/plan/index.shtm>

While most disasters cannot be avoided, the Federal Emergency Management Agency provides information on things people can do to lessen the loss of life and property damage.

<http://disasterhelp.gov>

DisasterHelp provides responders, emergency managers and homeland security advisors an online capability to collaborate with other members of the Disaster Management community. It is also a source of general information for citizens.

<http://www.sddot.com/travinfoweather.asp>

This page includes links to assist South Dakota travelers.

<http://www.ready.gov/>

The U.S. Department of Homeland Security has developed a website to assist citizens in learning about potential threats so that they are better prepared.

<http://www.ed.gov/emergencyplan/>

This website is designed to be a one-stop shop that provides school leaders with information they need to plan for any emergency, including natural disasters, violent incidents and terrorist acts.

<http://www.dhs.gov/xcitizens/>

Educating America's families on how best to prepare their homes for a disaster and tips for citizens on how to respond in a crisis a mission of the U.S. Department of Homeland Security.

<http://www.nws.noaa.gov>

The National Weather Service (NWS) provides weather, forecasts, and warnings for the entire United States.

<http://www.weather.gov/os/edures.shtml>

This page contains links to the National Oceanic Atmospheric Administration web sites that contain information about weather education.



South Dakota Office of
Emergency Management

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We're on the Web!
www.oem.sd.gov

The information contained in this newsletter has been compiled by various agencies concerned with the safety of our citizens. In one way or another whether as an original source or through a combination of documents, the Federal Emergency Management Agency, the American Red Cross, and the National Weather Service should be listed as the major agencies imparting these lifesaving ideas.

Severe Winter Weather Terms

The winter wonderland that makes South Dakota so beautiful during the snowy months can also be life threatening. Winter blizzards, heavy snows, ice storms, freezing rain and high winds can be a serious hazard. One of the best defenses is to stay informed. By understanding and observing storm warnings, adequate preparations can be made to lessen the impact of hazardous weather on ourselves, our property, and pets. To take full advantage of weather forecasts, know the specific meaning of the terms commonly used:

- **Freezing Rain**-creates a coating of ice on roads and walkways.
- **Sleet**-is rain that runs to ice pellets before reaching the ground. Sleet also causes roads to freeze and become slippery.
- **Winter Weather Advisory**-means cold, ice, and snow are expected.
- **Winter Storm Watch**-means severe weather such as heavy snow or ice is possible in the next day or two.
- **Blizzard Warning**-means heavy snow and strong winds will produce a blinding snow, near zero visibility, deep drifts, and life-threatening wind chill.
- **Frost/Freeze Warning**-means below freezing temperatures are expected.
- **Winter Storm Warning**-means severe winter conditions have begun or will begin very soon.

When a winter storm warning is issued:

~Stay indoors

~If you must go outside wear several layers of lightweight clothing, those layers will keep you warmer than a single heavy coat.

~Gloves and a hat will prevent loss of body heat. Cover your mouth to protect your lungs.

~Walk carefully on snowy, icy walkways.

